



**MATERIAL SAFETY DATA SHEET**  
**VERTELLUS SPECIALTIES INC.**



**SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name:</b>	<b>Light Coal Tar Distillates</b>			
<b>Chemical Name:</b>	Tar oils, coal	<b>Synonyms:</b>	Front End Oil (FEO); Crude Naphthalene Oil; Light Carbolic Oil Residue (LCOR)	
<b>CAS Number:</b>	65996-82-9	<b>Product Use:</b>	chemical intermediate	
<b>Manufacturer Information:</b>	Vertellus Specialties Inc.	<b>Emergency Phone Number (24 hr.):</b>	(317) 247-8141	
	300 North Meridian Street, Suite 1500	<b>CHEMTREC Phone Number (24 hr.):</b>	(800) 424-9300	
	Indianapolis, Indiana 46204 USA		(collect calls accepted)	
<b>Non-Emergency Phone Number:</b>	(317) 247-8141	<b>International CHEMTREC (24 hr.):</b>	(703) 527-3887	
<b>Non-Emergency Fax Number:</b>	(317) 248-6413		(collect calls accepted; 011 prefix not needed)	

**SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS**

<b>Ingredient</b>	<b>CAS Number</b>	<b>Concentration (%)</b>	<b>Exposure Limits</b>	
			<b>OSHA PEL</b>	<b>ACGIH TLV</b>
Light Coal Tar Distillates	65996-82-9	100 %	0.2 mg/m <sup>3</sup> as 8-hr TWA (coal tar pitch volatiles)	0.2 mg/m <sup>3</sup> as 8-hr TWA (coal tar pitch volatiles)

**SECTION 3: HAZARDS IDENTIFICATION**

**Emergency Overview:**

Brown to black oily liquid with an aromatic odor. Carcinogen. Toxic. Irritant. Sensitizer (skin). Combustible Liquid.

**Signs and Symptoms of Potential Overexposure:**

Coal tar distillate vapors are irritating to the skin, eyes and respiratory tract. Direct skin contact and/or high vapor concentrations may cause burning and itching, changes in pigmentation, and skin eruptions. Direct eye contact may cause inflammation, discomfort, and conjunctivitis. In general, acute oral toxicity is expected to be high to moderate, but ingestion is not likely to be a primary route of exposure. Symptoms of systemic poisoning after ingestion include nausea, salivation, vomiting, respiratory difficulties, dizziness, headache, loss of pupillary reflex, cyanosis, hypothermia, profuse sweating, and mild convulsions. Symptoms of overexposure via inhalation are expected to be similar to those previously listed. As an allergen, naphthalene may cause severe dermatitis in sensitized individuals.

**Primary Route(s) of Entry:**

skin contact, skin absorption, eye contact, inhalation, ingestion

**Medical Conditions Aggravated by Exposure:**

Persons with pre-existing skin disorders or central nervous functional illnesses may be at increased risk from overexposure. Exposure to vapors may aggravate pre-existing lung conditions. Persons with a glucose-6-phosphate dehydrogenase deficiency of the red blood cells are more susceptible to hemolytic anemia caused by naphthalene. This is not likely to be a problem when appropriate procedures are used to minimize exposure.

**SECTION 4: FIRST AID MEASURES**

<b>Skin Contact:</b>	Wash exposed area twice with waterless hand cleaner, soap and water, or a mild detergent. Do not use solvents on skin, as they may promote absorption of this material. The exposed area should be examined by medical personnel if irritation or pain persists after washing.
<b>Eye Contact:</b>	Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. GET MEDICAL ATTENTION.
<b>Inhalation:</b>	Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION.
<b>Ingestion:</b>	If conscious, induce vomiting to prevent further absorption. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION. Do not give anything by mouth to an unconscious person.

<b>Thermal Exposure:</b>	Contact with hot coal tar distillate causes serious burns. GET MEDICAL ATTENTION immediately in the event of exposure to heated product.
<b>Delayed Effects:</b>	none known
<b>Note to Physician:</b>	No specific antidote known. Treatment should be based on the judgment of the physician in response to the reactions of the patient.

#### SECTION 5: FIRE FIGHTING MEASURES

<b>Flash Point:</b>	158 - 165°F (FEO and LCOR) 140°F (Crude Nap Oil)	<b>Method:</b>	PMCC (FEO and LCOR) TCC (Crude Nap Oil)	<b>Autoignition Temperature:</b>	not available
<b>Flammable Limits:</b>		<b>UFL :</b>	not available	<b>LFL:</b>	not available
<b>Flammability Classification (OSHA):</b>	Combustible Liquid.				
<b>Hazardous Products of Combustion:</b>	Toxic vapors may be released upon thermal decomposition (nitrogen oxides, carbon monoxide, carbon dioxide, sulfur dioxide, PAH's).				
<b>Potential for Dust Explosion:</b>	not applicable				
<b>Special Flammability Hazards:</b>	Coal tar distillates at elevated temperatures may generate vapors that may ignite in the presence of air and a source of ignition. Closed containers may explode when exposed to extreme heat.				
<b>Appropriate Extinguishing Media:</b>	Water fog, carbon dioxide, dry chemical, foam, sand, steam. Water spray can control unconfined tar fires, but may cause frothing or eruption in closed tanks.				
<b>Basic Fire Fighting Guidance:</b>	Wear self-contained breathing apparatus and full protective clothing. Skin and eye contact should be avoided. Normal fire fighting procedures may be used.				

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Containment Techniques:</b>	Contain the spilled material using inert solids (i.e., sand, earth, etc.) and, if hot, allow the material to cool. Cooled material may then be shoveled into disposal containers.
<b>Clean-up Procedures &amp; Equipment:</b>	Wear protective equipment during clean-up. Remove all ignition sources. Ventilate area of spill or leak. Collect material for later disposal. After collection of product, flush area with water.
<b>Evacuation Procedures:</b>	Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
<b>Special Instructions:</b>	Avoid exposure to hot product during clean up. Ensure thorough decontamination of the release area and clean-up personnel.
<b>Special Reporting Requirements:</b>	Notify appropriate authorities if required by regulation.

#### SECTION 7: HANDLING AND STORAGE

<b>Storage Precautions:</b>	Protect containers from physical damage, sparks and flames.
<b>Storage Recommendations:</b>	Outside or detached storage is preferable. Maintain dry, ventilated conditions for storage. Containers should be periodically inspected.
<b>Precautions for Unique Hazards:</b>	not applicable
<b>Practices to Minimize Risk:</b>	Wear appropriate protective equipment when performing maintenance on contaminated equipment. Avoid prolonged or repeated contact with skin or breathing of vapors. Do not smoke or eat in areas where this material is handled. Wash hands thoroughly before eating or smoking. A complete soap and water shower should be taken at the end of each work day. Contaminated clothing should not be reworn until cleaned. Launder contaminated clothing separately from other laundry before reuse.
<b>Special Handling Equipment:</b>	Closed system handling of coal tar distillates may create excessive vapor concentrations in confined spaces; i.e., tanks, rail cars, tank trailers. Follow appropriate confined space entry procedures when entering any confined space that has been in coal tar distillate service.
<b>Dangerous Incompatibility Reactions:</b>	Keep away from strong oxidizing agents.
<b>Incompatibilities with Materials of Construction:</b>	none known

## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Exposure Limits:</b>	<b>OSHA PEL:</b> 0.2 mg/m <sup>3</sup> as 8-hr TWA (coal tar pitch volatiles) <b>ACGIH TLV:</b> 0.2 mg/m <sup>3</sup> as 8-hr TWA (coal tar pitch volatiles)
<b>Personal Protective Equipment:</b>	Use NIOSH-approved chemical cartridge respirator with organic vapor cartridges, or any supplied-air respirator as necessary for protection from coal tar distillate vapors (which may contain coal tar pitch volatiles). Wear impervious gloves (i.e., latex rubber), boots, work uniform and safety glasses or chemical goggles. Application of certain protective creams for coal tar products and sunscreens (SPF of at least 15) before and during work may be beneficial in reducing the risk of overexposure.
<b>Respirator Caution:</b>	Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.
<b>Ventilation:</b>	All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.
<b>Other Engineering Controls:</b>	All appropriate engineering controls should be used to minimize exposure potential.
<b>Thermal Hazards:</b>	When handling hot distillate (i.e., taking samples), wear appropriate thermal protection equipment and use tongs as needed. Use of chemical goggles or faceshields is highly recommended when handling heated material.
<b>Additive or Synergistic Effects:</b>	Overexposure to this material causes photosensitization of the skin. See sunscreen recommendations above.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Molecular Formula:</b>	a complex hydrocarbon mixture which includes polynuclear aromatic hydrocarbons (PAH's)
<b>Molecular Weight:</b>	not available
<b>Appearance, State &amp; Odor (ambient temperature):</b>	brown to black oily liquid with aromatic odor
<b>pH:</b>	6 to 8
<b>Vapor Pressure:</b>	< 5 mm Hg @ 20°C
<b>Vapor Density (air = 1):</b>	> 1.0
<b>Boiling Point:</b>	initial boiling point > 130°C
<b>Freezing Point:</b>	not available
<b>Melting Point:</b>	not applicable
<b>Solubility in Water:</b>	insoluble to slightly soluble
<b>Specific Gravity or Density:</b>	1.0 to 1.1 @ 20°C
<b>VOC Content:</b>	not available
<b>Softening Point:</b>	not applicable
<b>Bulk Density:</b>	8.7 lb/gal for Front End Oil 8.5 lb/gal for Crude Naphthalene Oil 8.5 - 8.8 lb/gal for Light Carbolic Oil Residue
<b>Octanol / Water Partition Coefficient:</b>	not available
<b>Odor Threshold:</b>	not available

## SECTION 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable
<b>Conditions to Avoid:</b>	Contact with water can cause frothing or eruption of closed tanks.
<b>Incompatibilities:</b>	strong oxidizers
<b>Hazardous Decomposition Products:</b>	not applicable

**Hazardous Polymerization:** will not occur

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Acute Oral LD<sub>50</sub>:</b>	not available	<b>Species:</b>	not available
<b>Acute Dermal LD<sub>50</sub>:</b>	not available	<b>Species:</b>	not available
<b>Acute Inhalation LC<sub>50</sub>:</b>	not available	<b>Duration:</b>	not available
<b>Species:</b>	not available		
<b>Skin / Eye Irritation:</b>	Moderate skin irritant / Moderate eye irritant		
<b>Target Organs:</b>	Skin, possibly lungs, nasal passages, bladder, liver, kidney and central nervous system.		
<b>Carcinogenicity:</b>	Coal tar pitch volatiles, soots, tars and oils are listed as a carcinogenic category by OSHA, ACGIH, the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC). Prolonged or repeated contact may lead to dermatitis, and with poor hygienic practices, to more serious skin disorders such as ulcerations, benign skin growths and skin cancer. Some epidemiological studies have suggested that workers exposed to coal tar pitch emissions in Soderberg aluminum manufacturing facilities may have a slightly increased risk of developing lung or bladder cancer. It is important to note, however, that the relevance of these findings to non-Soderberg facilities is currently unknown. Likewise, the relevance of these findings to handling of coal tar distillates, instead of pitches, is currently unknown.		
<b>Teratogenicity:</b>	No data available.		
<b>Reproductive Effects:</b>	No scientific study supports an association between coal tar distillate exposures and human reproductive hazards.		
<b>Neurotoxicity:</b>	No data available.		
<b>Mutagenicity:</b>	Available data characterizes coal tar distillate as a mutagen.		
<b>Additional Toxicity Information:</b>	Overexposures may lead to photosensitization of the skin. Naphthalene may act as an allergen in sensitive individuals.		

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** No data available.

**Environmental Fate:** No data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

**US EPA Waste Number:** Wastes should be tested to determine if they exceed the thresholds for D018 (Benzene) and D023 - D026 (Cresols).

**Classification of Waste as Manufactured:** Potentially Hazardous  
(per federal regulations) NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations.

**Waste Disposal:** Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

## SECTION 14: TRANSPORT INFORMATION

**DOT Proper Shipping Name:** *When shipping < flash point:* RQ Environmentally Hazardous Substance, liquid, n.o.s., (contains Benzene & Naphthalene), 9, UN3082, PG III.

*When shipping > flash point:* RQ Elevated Temperature Liquid, flammable, (contains Benzene & Naphthalene), 3, UN3256, PG III.

**OR**

HOT Coal Tar Distillates, Flammable, 3, UN1136, PG III, RQ (contains Benzene & Naphthalene).

Emergency Guidebook Numbers: NAERG: 171 when UN 3082; 128 when UN3256 or UN1136

### SECTION 15: REGULATORY INFORMATION

OSHA Hazards: Carcinogen. Toxic. Irritant. Sensitizer (skin). Combustible Liquid.

Chemical Inventory Status:	TSCA:	Yes	EINECS:	Yes	Canada:	Yes - DSL
	Japan:	No	Korea:	Yes	Australia:	No
	China:	No	Philippines:	No		

SARA 313:	Naphthalene (CAS #: 91-20-3)	40 - 70%
	Cresols (various isomers) (CAS #: various)	6 - 8%
	Phenol (CAS #: 108-95-2)	3 - 4%
	Phenanthrene (CAS #: 85-01-8)	1 - 4%
	Xylenes (various isomers) (CAS #: various)	1 - 2%
	Anthracene (CAS #: 120-12-7)	0.5 - 2%
	Biphenyl (CAS #: 92-52-4)	0 - 2%
	Benzene (CAS #: 71-43-2)	0.3 - 0.5%
	Styrene (CAS #: 100-42-5)	0.3 - 0.5%

Other Regulatory Listings: WHMIS Classification:  
Class D Division 2 Subdivision A: Very Toxic Material.  
Class D Division 2 Subdivision B: Irritant  
Class D Division 2 Subdivision B: Sensitizer  
Class B Division 3: Combustible

Reportable Quantities: Approximately 150 - 200 lbs. (17 - 24 gallons) based on content of naphthalene.

State Regulations: CA Prop 65: Contains chemicals known to the State of California to cause cancer.

### SECTION 16: OTHER INFORMATION

**Precautionary Statement:** Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

Vertellus Hazard Rating System:  
(Based largely on HMIS and NFPA systems)

H:	3*	F:	2	R:	0
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Revision Date:	2 October 2002	Original Date of Issue:	1985
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Revision Details: Updated Section 12.  
Updated Section 14.